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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,984	02/15/2007	Johan Eker	P18656-US2	1283

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EXAMINER	
WITZENBURG, BRUCE A	
ART UNIT	PAPER NUMBER
2166	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/595,984	EKER ET AL.	
	Examiner	Art Unit	
	BRUCE A. WITZENBURG	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *22-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *22-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. In view of applicant's amendments filed 02/09/2009, claims 22-42 remain pending in this application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 22-31 and 37-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burn et al. (U.S. 6,018,747) hereafter Burns, in view of Blandford (U.S. 6,470,449) hereafter Blandford.

Regarding claim 22, Burns discloses a method of differentially updating an image of stored data in a mobile terminal from a first data version to an updated data version, the method comprising the steps of:

loading differential update instructions into a flash memory of the mobile terminal; (Abs; Fig 2c; Fig 5; Fig 6; Col 1, lines 7-11; Col 2, lines 28-52; Col 3, lines 21-25; Col 4, line 17 – Col 5, line 11)

generating an updated data version from the stored data and the loaded differential

update instructions; (Abs; Fig 2d; Fig 5; Fig 6; Col 1, lines 7-11; Col 2, lines 28-52; Col 3, lines 15-63; Col 4, line 17 – Col 5, line 11)

Burns does not specifically disclose detecting whether the image of stored data in the flash memory of the mobile terminal includes one or more corrupted memory blocks having stored therein data that is inconsistent with the first data version however Burns does make apparent the need to use the prior version in order to arrive at the appropriate final version. (Col 1, lines 51 – 63; Col 4, line 17 – Col 5, line 11) and due to this requirement, it would have been obvious to one of ordinary skill in the art at the time of the invention to use well known data verification techniques in order to verify the prior version has not been corrupted.

One such method which is well known in the art at the time of the invention as well as being disclosed by Blandford is that of a checksum (Col 5, line 66 - Col 6, line 4) In the case that the checksum test ends up being false and data is known to be corrupt, it then would have been obvious to again use the teachings of Burns as disclosed to produce a delta file for the known detected corrupt file to be updated to the old file in order to produce the correct updated file.

Note the above implementation as combined would repair, when generating the updated data version, any such detected corrupted memory block; wherein the image of stored data in the flash memory is updated in-place such that data of the first data

version is reused and reorganized to generate the updated data version as shown above.

Regarding claim 23, claim 23 is rejected for substantially the same reason as claim 22 above.

Regarding claim 24, claim 24 is rejected for substantially the same reason as claim 23 above.

Regarding claim 25, claim 25 is rejected for substantially the same reason as claim 24 above.

Regarding claim 26, claim 26 is rejected for substantially the same reason as claim 23 above. Note application of the patch happens at the mobile terminal.

Regarding claim 27, claim 27 is rejected for substantially the same reason as claim 22 above.

Regarding claim 28, Burns discloses communication via a wireless communications link (Col 3, line 66 - Col 4, line 11)

Regarding claim 29, claim 29 is rejected for substantially the same reason as claim 28 above.

Regarding claim 30, Burns as modified does not specifically provide detection of corrupted memory blocks being performed at the terminal, however the terminal stores the file which is to be updated and thus it would have been obvious to one of ordinary skill in the art at the time of the invention to detect at the mobile terminal in order to cut down on network bandwidth usage. Additionally, the only two reasonable options for detection of corruption are detection at the mobile terminal and detection at the remote processing system. Due to the fact there are only two options, using one of them would have met the requirement of being obvious to try.

Regarding claim 31, Burns as modified does not specifically provide detection of corrupted memory blocks being performed at the remote processing system, however the remote processing system generally has greater computational power thus it would have been obvious to one of ordinary skill in the art at the time of the invention to detect at the remote processing system in order to cut down on processing time. Additionally, the only two reasonable options for detection of corruption are detection at the mobile terminal and detection at the remote processing system. Due to the fact there are only two options, using one of them would have met the requirement of being obvious to try.

Regarding claim 37, Burns discloses a mobile terminal comprising: a flash memory for storing an image of data; (Abs; Fig 2c; Fig 5; Fig 6; Col 1, lines 7-11; Col 2, lines 28-52; Col 3, lines 21-25; Col 4, line 17 – Col 5, line 11)
communications means adapted to receive from a data processing system differential update instructions for updating the image of data stored in the flash memory from a first data version to an updated data version; (Abs; Fig 2c; Fig 5; Fig 6; Col 1, lines 7-11; Col 2, lines 28-52; Col 3, lines 21-25; Col 4, line 17 – Col 5, line 11)
processing means adapted to generate the updated data version from the image of the stored data and from the received differential update instructions, (Abs; Fig 2d; Fig 5; Fig 6; Col 1, lines 7-11; Col 2, lines 28-52; Col 3, lines 15-63; Col 4, line 17 – Col 5, line 11)

Burns does not specifically disclose generate information from the stored data indicative of the presence or absence of one or more corrupted memory blocks having stored therein data that is inconsistent with the first data version, however Burns does make apparent the need to use the prior version in order to arrive at the appropriate final version. (Col 1, lines 51 – 63; Col 4, line 17 – Col 5, line 11) and due to this requirement, it would have been obvious to one of ordinary skill in the art at the time of the invention to use well known data verification techniques in order to verify the prior version has not been corrupted.

One such method which is well known in the art at the time of the invention as well as being disclosed by Blandford is that of a checksum (Col 5, line 66 - Col 6, line 4) In the case that the checksum test ends up being false and data is known to be corrupt, it then would have been obvious to again use the teachings of Burns as disclosed to produce a delta file for the known detected corrupt file to be updated to the old file in order to produce the correct updated file.

Note the above implementation as combined would communicate the generated information via the communications means to the data processing system for generating the differential update instructions; and
repair any such detected corrupted memory block; wherein the image of stored data in the flash memory is updated in-place such that data of the first data version is reused and reorganized to generate the updated data version as shown above.

Regarding claim 38, Burns discloses a data processing system for facilitating differentially updating an image of stored data in a mobile terminal from a first data version to an updated data version, the data processing system comprising:
means for loading differential update instructions into a flash memory of the mobile terminal, the differential update instructions causing a processor of the mobile terminal to generate the updated data version from the an image of stored data and the loaded differential update instructions; (Abs; Fig 2c; Fig 5; Fig 6; Col 1, lines 7-11; Col 2, lines 28-52; Col 3, lines 21-25; Col 4, line 17 – Col 5, line 11)

Burns does not specifically disclose a means for receiving information from the mobile terminal indicative of the presence or absence of one or more corrupted memory blocks wherein the image of stored data is inconsistent with the first data version, however Burns does make apparent the need to use the prior version in order to arrive at the appropriate final version. (Col 1, lines 51 – 63; Col 4, line 17 – Col 5, line 11) and due to this requirement, it would have been obvious to one of ordinary skill in the art at the time of the invention to use well known data verification techniques in order to verify the prior version has not been corrupted.

One such method which is well known in the art at the time of the invention as well as being disclosed by Blandford is that of a checksum (Col 5, line 66 - Col 6, line 4) In the case that the checksum test ends up being false and data is known to be corrupt, it then would have been obvious to again use the teachings of Burns as disclosed to produce a delta file for the known detected corrupt file to be updated to the old file in order to produce the correct updated file.

Note the above implementation as combined would include a processing means adapted to generate the differential update instructions from the first and updated data versions and from the received information;
and include repair instructions into the differential update instructions, wherein the repair instructions are adapted to cause the processor of the mobile terminal to repair any

such detected corrupted memory block; wherein the image of stored data in the flash memory of the mobile terminal is updated in-place such that data of the first data version is reused and reorganized to generate the updated data version as shown above.

Regarding claim 39 claim 39 is rejected for substantially the same reason as claim 38 above.

Regarding claim 40 Ferrat discloses a computer program comprising program code means adapted to cause a data processing system to facilitate differentially updating an image of stored data in a flash memory of a mobile terminal from a first data version to an updated data version (Abs; Fig 2c; Fig 5; Fig 6; Col 1, lines 7-11; Col 2, lines 28-52; Col 3, lines 21-25; Col 4, line 17 – Col 5, line 11) by performing the following steps, when the program is executed on the data processing system:
generating differential update instructions from the first and updated data versions and from information received from the mobile terminal, (Abs; Fig 2c; Fig 5; Fig 6; Col 1, lines 7-11; Col 2, lines 28-52; Col 3, lines 21-25; Col 4, line 17 – Col 5, line 11)
loading the generated differential update instructions into the flash memory of the mobile terminal, the differential update instructions causing the processor of the mobile terminal to generate the updated data version from the stored data and the loaded differential update instructions, wherein the image of stored data in the flash memory of the mobile terminal is updated in-place such that data of the first data version is reused

and reorganized to generate the updated data version. (Abs; Fig 2c; Fig 5; Fig 6; Col 1, lines 7-11; Col 2, lines 28-52; Col 3, lines 21-25; Col 4, line 17 – Col 5, line 11)

Burns does not specifically disclose the received information being indicative of the presence or absence of one or more corrupted memory blocks having stored therein data that is inconsistent with the first data version, however Burns does make apparent the need to use the prior version in order to arrive at the appropriate final version. (Col 1, lines 51 – 63; Col 4, line 17 – Col 5, line 11) and due to this requirement, it would have been obvious to one of ordinary skill in the art at the time of the invention to use well known data verification techniques in order to verify the prior version has not been corrupted.

One such method which is well known in the art at the time of the invention as well as being disclosed by Blandford is that of a checksum (Col 5, line 66 - Col 6, line 4) In the case that the checksum test ends up being false and data is known to be corrupt, it then would have been obvious to again use the teachings of Burns as disclosed to produce a delta file for the known detected corrupt file to be updated to the old file in order to produce the correct updated file.

Note the above implementation as combined would include generating differential update instructions comprising including repair instructions into the differential update instructions as shown above.

Regarding claim 41, claim 41 is rejected for substantially the same reason as claim 29 above.

Regarding claim 42, claim 42 is rejected for substantially the same reason as claim 31 above.

4. Claims are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns, in view of Blandford and in further view of Kocher et al (US 6,289,455) hereafter Kocher

Regarding claim 32, Ferrat does not necessarily disclose calculating and using checksums to verify memory integrity, however Kocher discloses using such checksums. (Col 27, line 57 – Col 28, line 4) Because checksums used to calculate memory errors are well known to those of ordinary skill in the art at the time of the invention and Ferrat "provides the necessary interfaces for resolving errors and conflicts between synchronized data." It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Ferrat with the teachings of Kocher in order to provide memory error checking through checksums.

Regarding claim 33, claim 33 is rejected for substantially the same reason as claim 32 above. Note that Kocher discloses "includ[ing checksums] in stored data" (Col 28, lines 2-4)

Regarding claim 34, Ferrat does not disclose using a message authentication code to check reference checksums. As demonstrated by Kocher (Col 5, lines 4-12) and as is well known in the art at the time of the invention, changes to data can be accompanied by a message authentication code in order to assure the software data was not tampered with and it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Ferrat with the teachings of Kocher in order to include a message authentication code for the checksums to further assure that a data failure did not occur and that the information was not tampered with.

Regarding claim 35, claim 35 is rejected for substantially the same reason as claim 32 above. Note that comparing a transmitted data segment to a centralized data segment is the most common and easiest to implement form of write operation verification and therefor is held to be either inherent or obvious to one of ordinary skill in the art at the time of the invention over Kocher (Col 27, line 57 – Col 28, line 4)

Regarding claim 36, Ferrat does not disclose using one-way hash functions on the memory block, However Kocher discloses using one-way hash operations for data protection and verification (Col 26, line 54 – Col 27, line 5) it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Ferrat with the teachings of Kocher in order to provide further system security.

Response to Arguments

In response to applicant's arguments filed 02/09/2009, the arguments have been considered but are deemed moot in light of the new grounds of rejection presented above which was necessitated by amendment.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRUCE A. WITZENBURG whose telephone number is (571)270-1908. The examiner can normally be reached on M-F 9:00 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bruce A Witzenburg/

Examiner, Art Unit 2166

/Etienne P LeRoux/

Primary Examiner, Art Unit 2161